



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,881	11/08/2001	Mark Albert Crowder	SLA 0629	5303

7590 09/30/2003

Matthew D. Rabdau, Patent Attorney
Sharp Laboratories of America, Inc.
5750 NW Pacific Rim Boulevard
Camas, WA 98607

EXAMINER

ISAAC, STANETTA D

ART UNIT PAPER NUMBER

2812

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/008,881

Applicant(s)

CROWDER, MARK ALBERT

Examiner

Stanetta D. Isaac

Art Unit

2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-11 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s). _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 11 is objected to because of the following informalities: **comprises** appears twice.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 5-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Park et al. US Patent 6,326,286.

4. Park discloses the semiconductor method substantially as claimed. See **FIGS. 1A-26E** where Park teaches a method of crystallizing a thin film of material comprising the steps of:

- a) depositing a thin film of material over a substrate **260**;

Art Unit: 2812

- b) irradiating regions **183-1** of the material with a first array of beamlets by positioning a mask **180** comprising the pattern of the first array of beamlets over the regions;
- c) stepping the mask **180** until a second array of beamlets is positioned at least partially overlapping the regions irradiated by the first array of beamlets;
- d) irradiating regions adjacent **183-2** to the regions irradiated by the first array of beamlets;
- e) stepping the mask until a third array of beamlets is positioned at least partially overlapping the regions irradiated by the first array of beamlets and the second array of beamlets;
- f) irradiating regions **185-1** of the material with the third array of beamlets;
- g) stepping the mask until a fourth array of beamlets is positioned at least partially overlap regions of the material irradiated by the third array of beamlets; and
- h) irradiating regions adjacent **187-4** to the regions irradiated by the third array of beamlets.

5. Pertaining to claim 6, Park teaches the method of claim 5, wherein the mask is not rotated relative to the material during processing.

6. Pertaining to claim 7, Park teaches a method of performing a 2+2 process on a material layer deposited over a substrate comprising the steps of:

- a) providing a mask **180** comprising a first set of substantially parallel slits **180-2** and a second set of substantially parallel slits **180-3** at an angle relative to the first set of slits;
- b) performing a first 2-shot process using the first set of slits;
- c) translating the mask laterally; and
- d) performing a second 2-shot process using the second set of slits.

Art Unit: 2812

7. Pertaining to claim 8, Park teaches the method of claim 7, wherein the mask is translated laterally without rotating the substrate relative to the mask.

8. Pertaining to claim 9, Park teaches the method of claim 7, wherein the second set of substantially parallel slits is at an approximately 90 degree angle relative to the first set of slits.

9. Pertaining to claim 10, Park teaches the method of claim 7, wherein the first set of slits comprises a first array of beamlets and a second array of beamlets, and the step of performing the first 2-shot process further comprises the steps of:

- a) irradiating the material layer through the first array of beamlets to crystallize a first set of material regions;
- b) translating the mask laterally; and
- c) irradiating the material layer through the second array of beamlets to crystallize regions of the material layer adjacent to the first set of material regions.

10. Pertaining to claim 11, Park teaches the method of claim 10, wherein the second set of slits comprises a third array of beamlets and a fourth array of beamlets, and the step of performing the second 2-shot process further comprises the steps of:

- a) irradiating the material layer through the third array of beamlets to recrystallize regions of material;
- b) translating the mask laterally; and
- c) irradiating the material layer through the fourth array of beamlets to crystallize regions of the material layer adjacent to the material crystallized by the third set of beamlets.

Art Unit: 2812

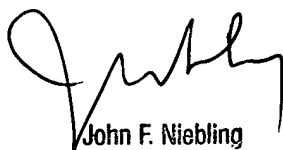
Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stanetta D. Isaac whose telephone number is 703-308-5871. The examiner can normally be reached on Monday-Friday 7:30am -5:30pm.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Nebling can be reached on 703-308-3325. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

13. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Stanetta Isaac
Patent Examiner
September 10, 2003


John F. Niebling
Supervisory Patent Examiner
Technology Center 2800